

Query By Example (QBE)

QBE stands for **Query By Example** and it was developed in 1970 by Moshe Zloof at IBM.

It is a graphical query language where we get a user interface and then we fill some required fields to get our proper result.

In **SQL** we will get an error if the query is not correct but in the case of QBE if the query is wrong either we get a wrong answer or the query will not be going to execute but we will never get any error.

In QBE we don't write complete queries like SQL or other database languages it comes with some blank so we need to just fill that blanks and we will get our required result.

Example

Consider the example where a table college_dept present in the database with Name, Phone_Number and Branch fields. And we want to get the name of Course-Representative name who belongs to the MCA Branch. If we write this query in SQL we have to write it like

```
SELECT NAME  
FROM COLLEGE_DEPTc  
WHERE BRANCH = 'MCA'
```

In the case of QBE, it may be done as like there is a field present and we just need to fill it with "MCA" and then click on SEARCH button we will get our required result.

Points about QBE:

- Supported by most of the database programs.
- It is a Graphical Query Language.
- Created in parallel to SQL development.

Features:

- 2-D relation language.
- Display results.
- Fill up templates of relations for query formulation.
- Example of a possible answer is entered by the user.

'Example Tables' in QBE

Users specify a query by filling in example tables, or skeletons; we will use these skeletons in our examples.

4 types of areas

Table-name area	Column-name areas
Row-operation area	Data entry area

SP	S#	P#	Qty

Parts	P#	Pname	color

Suppliers	S#	sname	City	status

Data Manipulation in QBE

Retrieval

Modification

Simple retrieval.

Prefix P. to indicate attribute to be retrieved.

P	P#	Color	Pname
		< > Green	P._C

Ex: Find the P# that is Red.

(A variable that appears only once can be omitted)

P	P#	Color	Pname
	P.	Red	

QBE is an elegant, user-friendly query language based on DRC.

It is quite expressive (relationally complete, if the update features are taken into account).

Simple queries are especially easy to write in QBE, and there is a minimum of syntax to learn.

He influenced the graphical query facilities offered in many products, including Borland's Paradox and Microsoft's Access.